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EXAMINER	
FELTON, MICHAEL J	
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/675,584	CLARK ET AL.	
	Examiner	Art Unit	
	MICHAEL J. FELTON	1747	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *12/01/2010*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *4,8,9,12-14,20,21,24-27,33-40 and 42-46* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *4,8,9,12-14,20,21,24-27,33-40 and 42-46* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *2/11/2011, 12/01/2010*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Response to Arguments

1. Applicant's arguments with respect to all claims have been considered but are moot in view of the new ground(s) of rejection.

2. Applicant's arguments filed 12/01/2010 have been fully considered but they are not persuasive.

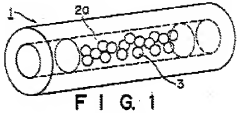
3. The applicant argues that the invention as claimed in claim 1 of copending Application No. 10/675937 is patentable distinct. The examiner disagrees.

4. In response to applicant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.,* 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986).

5. In response to applicant's argument that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e., two separate sections of filter material annularly around a central portion) are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

6. In particular, the applicant argues that Tateno et al. do not teach two separate sections of filter material annularly around a central potion. The examiner agrees,

however, the instant claims do not recite these features. The relevant portion of claim 27 states, "...said first section of filter material comprising a longitudinally extending central portion of fibrous tow filter material, a longitudinally extending outer portion of fibrous tow filter material positioned annularly around the central portion, and a compartment having a structure defined by the inner central portion".



F I G. 1

7. The embodiments disclosed in figures 1 and 3 of Tateno et al. show an outer annular portion of material around a central portion and a compartment having a structure defined by a longitudinally extending central portion of filter material (shown on either side of the compartment containing the capsules). Therefore, because the structure disclosed by Tateno et al. meets this portion of the claim limitations, the examiner maintains the rejection.

Claim Rejections - 35 USC § 103

8. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

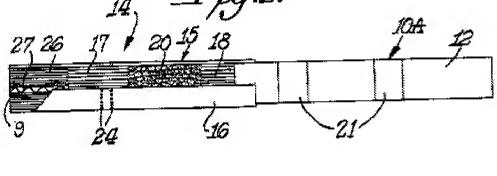
9. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation

under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

10. Claims **27, 4, 8, 9, 13, 14, 20, 24-26, 33-40, and 46** are rejected under 35 U.S.C. 103(a) as being unpatentable over Jupe et al. (WO 02/069745 A1) in view of Tateno et al. (US 4,889,144) and applicant's admitted prior art.

11. Regarding claim **27**, Jupe et al. disclose a multi-segment cigarette filter comprising a plug-space-plug arrangement consisting of a fibrous tow filter adjacent to the tobacco rod (figure 2, element 18) followed by an adsorbent bed (figure 2, element 20), followed by a mouth end fibrous tow filter segment (fig. 2, element 26) containing a flavor releasing component (figure 2, element 27). Jupe et al. disclose that the plug wraps and tipping paper may be used (page 9, paragraph 2), and it is conventional in the art that the filter segment is first wrapped with a plug wrap and then connected with the tobacco rod using tipping paper. It would have been obvious to one of ordinary skill in the art at the time of invention that the filter of Jupe et al. would have been constructed with such a plug wrap and tipping paper.

Fig.2.



12. Jupe et al. also disclose that in a preferred embodiment shown in figure 2, the tobacco end segment (fig 2, 18) has a resistance to draw (RTD) of 25-35 and the mouth end segment (fig 2, 27 and 26) has a RTD of 15-20 (see Table II). Jupe et al. indicate that resistance to draw is directly related to particulate removal efficiency (i.e. low RTD segments have low particulate removal efficiency; page 13, paragraph 2). Therefore, one of ordinary skill in the art would understand that the embodiment shown in figure 2 of Jupe et al., and described in table II, contains a second section of filter material (the tobacco end section) having a greater particulate removal efficiency than the first section of filter material (the mouth end segment).

13. Please note that the embodiment illustrated in figure 2 of Jupe et al. is distinct from the embodiment shown in figure 1 with respect to the RTD of each particular filter segment and its location. For instance, although Jupe et al. state that in the structure shown in figure 1, the filter segment proximal to the tobacco rod should have the lowest RTD (page 11, last paragraph—page 12, first paragraph and Table I). This is not the case with the structure shown in figure 2 and described in Table II, which discloses that the RTD of the section proximal to the tobacco rod has a higher RTD than the mouth end segment (see Table II).

14. Although Jupe et al. disclose that the mouth end segment is made of tow and should contain a flavor bearing ribbon or thread, it would have been obvious to one of ordinary skill in the art at the time of invention that other flavor releasing filter segment could be used in place of the thread containing section. For instance, Tateno et al.

disclose a flavor releasing cigarette filter segment consisting of an outer annular filter tow with an inner cavity containing ruptureable capsules between two inner fibrous plugs (see figures 1 and 3). It would have been obvious to one of ordinary skill in the art at the time of invention that the flavored filter segment of Tateno et al. could have been used in place of the flavored ribbon containing segment in the filter of Jupe et al. Doing so would have extended the storage life of the cigarette of Jupe et al. as flavors contained in capsules are generally more stable than flavors adsorbed on fibers (see discussion by Tateno et al., col. 1, 10-51).

15. Tateno et al. disclose microcapsules composed of polysaccharide shells and a variety of flavor compounds but do not disclose capsules made of a gelatin outer shell and an interior composed of a flavoring agent and a triglyceride. However, the applicant states that capsules composed of an outer gelatin shell and a mixture of medium chain triglycerides and flavor agents are commercially available from Mane Aromatic Flavors, Nice, France (paragraphs 0073), including capsules containing menthol. It would have been obvious to one of ordinary skill in the art at the time of invention to use commercially available encapsulated flavors in place of the encapsulated flavors in the invention of Tateno et al. because doing so would have reduced the capital and production costs associated with creating the encapsulated flavors of Tateno et al. and the results would have been predictable (i.e. the capsules would have broken and released flavor upon squeezing).

16. Regarding claims **4 and 33**, Jupe et al. disclose that the upstream filter (proximal to the tobacco rod) is composed of cellulose acetate tow (page 7, paragraph 3). Tateno

et al. do not expressly disclose that the outer and inner filter segments are composed of cellulose acetate, but do state:

> A filter tip for enclosing flavor-sealed particles according to the present invention may be prepared by arranging in parallel a certain amount of synthetic fibers such as polyacetate and polyester, or of natural fibers such as pulp and cotton, which are normally employed in conventional tobacco filters, and providing a space for enclosing the flavor-sealed particles therein. (col. 3, 6-19)

17. It would have been obvious to one of ordinary skill in the art at the time of invention that it would have been obvious to use the same filter material as specified by Jupe et al. (cellulose acetate). Furthermore, it is notoriously well known in the art that plasticized cellulose acetate tow (with plasticizers such as triacetin) is used as the conventional filter material in the art.

18. Regarding claims **8 and 9**, Jupe et al. disclose that the multi-component filter is 34 mm long (page 11, paragraph 3).

19. Regarding claims **13, 14, 36, 37, and 38**, Jupe et al. disclose the adsorbent bed should contain 90-120 mg (page 11, paragraph 2) of activated carbon particles (i.e. granules) with a mesh size from 10 to 70 are contained in the adsorbent bed (page 8, paragraphs 2 and 3).

20. Regarding claims **20, 24, 25, 26, 34, 35, 39, and 46**, Tateno et al. disclose spherical capsules (see figures) that have sizes between 1.8 and 5 mm, and preferable 2.5 to 5 mm in diameter (col. 2, 14-29). The capsules contain flavor materials such as, mint, cinnamon, menthol and vanilla (col. 2, 35-50). The examiner considers mint, cinnamon, and menthol as breath freshening agents (i.e. they are used in commonly sold breath fresheners) and menthol is also known commonly known as a cooling agent

(i.e. creates a cooling sensation on the skin, throat, or other areas). The volatile flavors disclosed would inherently affect the overall composition of smoke produced by the filtered cigarette.

21. Regarding claim **40**, example 1 of Tateno et al. indicate that 1.5 parts of L-menthol are added to 26.5 parts of other, non-water ingredients. This results in particles that contain about 5% L-menthol. Furthermore, should the examiner's calculations not be correct, it would have been obvious to change the amount of flavoring to obtain various amounts to flavor the cigarette smoke because it has been held that discovering an optimum value of a result effective variable involves only routine skill in the art. *In re Boesch,* 617 F.2d 272, 205 USPQ 215 (CCPA).

22. Claim **12** is rejected under 35 U.S.C. 103(a) as being unpatentable over Jupe et al. (WO 02/069745 A1), Tateno et al. (US 4,889,144), and applicant's admitted prior art as applied to claim 37 above, and further in view of Jones et al. (US 5,307,823). Jupe et al. does not disclose the activity of the activated carbon to be used. However, it would have been obvious to one of ordinary skill in the art at the time of invention to use activated carbon with activities between 60 and 150. For instance, Jones et al. disclose that activated carbon to be used in a cigarette should have carbon tetrachloride activities between 20 and 150% (col. 2, 22-25). It would have been obvious that activated carbon would have been available with activities in this range an that higher activity carbon would have been advantageous as it would have the ability to remove more unwanted and unhealthy cigarette smoke components.

23. Claim **45** is rejected under 35 U.S.C. 103(a) as being unpatentable over Jupe et al. (WO 02/069745 A1), Tateno et al. (US 4,889,144), and applicant's admitted prior art as applied to claim 27 above, and further in view of Berger (US 4,046,063). Jupe et al. and Tateno et al. do not disclose crimping the filter element. Berger discloses a cigarette with a filter element that is an outer cylindrical shape and an inner filter member made from steam bonded cellulose acetate (see figure 1 below regarding shape, col. 6, 2-9 and col. 3, 34-53 regarding steam bonding and cellulose acetate). The inner filter member has a cavity that has a cylindrical end and a conical end and on the other side of the conical end is a crimped structure in the shape of a cross. It would have been obvious to one of ordinary skill in the art at the time of invention to use the crimped structure of Berger, filled with the flavor capsules of Tateno et al. in the filter of Jupe et al. Berger provides motivation for inserting active ingredients within the crimped portion because, Berger incorporates by reference US 3,533,416 (to Brooks and Berger), that contains adsorbents or smoke-modifying materials in a similar cavity to Berger.

24. Claims **42-44** are rejected under 35 U.S.C. 103(a) as being unpatentable over Jupe et al. (WO 02/069745 A1), Tateno et al. (US 4,889,144), and applicant's admitted prior art as applied to claim 27 above, in further view of Keritsis (US 5,115,823).

25. Jupe et al. disclose the resistance to draw of the respective filter segments in figure 2 (see Table II) but do not indicate how the various ranges of resistance to draw are achieved. However, Keritsis discloses that, "The art is aware of many variables

available to manipulate the RTD of a material. These include its relative cross-sectional area in the filter, density, and relative void volume, which one can control as a function of compression or the size of denier" (col. 4, line 68—col. 5, line 5). It would have been obvious to one of ordinary skill in the art at the time of invention to use filaments of different denier to achieve different void volumes and therefore RTD to make the filters of Jupe et al. It would have been obvious to change the denier of the mouth end and tobacco end filter segments of Jupe et al. to obtain various amounts of resistance to draw as taught by Keritsis because it has been held that discovering an optimum value of a result effective variable involves only routine skill in the art. *In re Boesch,* 617 F.2d 272, 205 USPQ 215 (CCPA).

26. Claims **27, 4, 8, 13, 14, 20-26, and 33-44** are rejected under 35 U.S.C. 103(a) as being unpatentable over Jupe et al. (WO 02/069745 A1) in view of Tateno et al. (US 4,889,144).

27. Regarding claims 27, Jupe et al. disclose a multi-segment cigarette filter comprising a plug-space-plug arrangement consisting of a fibrous tow filter adjacent to the tobacco rod (figure 1, element 18) followed by an adsorbent bed (figure 1, element 20), followed by a fibrous tow filter segment (fig. 1, element 26) containing a flavor releasing component (figure 1, element 27). Jupe et al. disclose that the plug wraps and tipping paper may be used (page 9, paragraph 2), and it is conventional in the art that the filter segment is first wrapped with a plug wrap and then connected with the tobacco rod using tipping paper. It would have been obvious to one of ordinary skill in

the art at the time of invention that the filter of Jupe et al. would have been constructed with such a plug wrap and tipping paper.

28. Although Jupe et al. disclose that the filter segment downstream from the adsorbent bed is made of tow and should contain a flavor bearing ribbon or thread, it would have been obvious to one of ordinary skill in the art at the time of invention that other flavor releasing filter segment could be used in place of the thread containing section. For instance, Tateno et al. disclose a flavor releasing cigarette filter segment consisting of an outer annular filter tow with an inner cavity containing ruptureable capsules between two inner fibrous plugs (see figures 1 and 3). It would have been obvious to one of ordinary skill in the art at the time of invention that the flavored filter segment of Tateno et al. could have been used in place of the flavored ribbon containing segment in the filter of Jupe et al. Doing so would have extended the storage life of the cigarette of Jupe et al. as flavors contained in capsules are generally more stable than flavors adsorbed on fibers (see discussion by Tateno et al., col. 1, 10-51).

29. Regarding claim 4 and 33, Jupe et al. disclose that the upstream filter (proximal to the tobacco rod) is composed of cellulose acetate tow (page 7, paragraph 3). Tateno et al. do not expressly disclose that the outer and inner filter segments are composed of cellulose acetate, but do state:

> A filter tip for enclosing flavor-sealed particles according to the present invention may be prepared by arranging in parallel a certain amount of synthetic fibers such as polyacetate and polyester, or of natural fibers such as pulp and cotton, which are normally employed in conventional tobacco filters, and providing a space for enclosing the flavor-sealed particles therein. (col. 3, 6-19)

30. It would have been obvious to one of ordinary skill in the art at the time of invention that it would have been obvious to use the same filter material as specified by Jupe et al. (cellulose acetate). Furthermore, it is notoriously well known in the art that plasticized cellulose acetate tow (with plasticizers such as triacetin) is used as the conventional filter material in the art.

31. Regarding claim 8, Jupe et al. disclose that the multi-component filter is 34 mm long (page 11, paragraph 3).

32. Regarding claims 13, 14, 36, 37, and 38, Jupe et al. disclose the adsorbent bed should contain 90-120 mg (page 11, paragraph 2) of activated carbon particles (i.e. granules) with a mesh size from 10 to 70 are contained in the adsorbent bed (page 8, paragraphs 2 and 3).

33. Regarding claim 21, the capsules of Tateno et al. contain an inner flavoring liquid (L-menthol, see example 1) and a diluting agent (corn starch, example 1; and col. 2, 51-59), surrounded by a gelatin shell (calcium alginate gel, see example 1).

34. Regarding claims 20, 24, 25, 26, 34, 39, Tateno et al. disclose spherical capsules (see figures) that have sizes between 1.8 and 5 mm, and preferable 2.5 to 5 mm in diameter (col. 2, 14-29). The capsules contain flavor materials such as, mint, cinnamon, menthol and vanilla (col. 2, 35-50). The examiner considers mint, cinnamon, and menthol as breath freshening agents (i.e. they are used in commonly sold breath fresheners). The volatile flavors disclosed would inherently affect the composition of smoke produced by the filtered cigarette.

35. Regarding claim 40, example 1 of Tateno et al. indicate that 1.5 parts of L-menthol are added to 26.5 parts of other, non-water ingredients. This results in particles that contain about 5% L-menthol. Furthermore, should the examiner's calculations not be correct, it would have been obvious to change the amount of flavoring to obtain various amounts to flavor the cigarette smoke because it has been held that discovering an optimum value of a result effective variable involves only routine skill in the art. *In re Boesch,* 617 F.2d 272, 205 USPQ 215 (CCPA).

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to MICHAEL J. FELTON whose telephone number is (571)272-4805. The examiner can normally be reached on Monday to Friday, 7:30 AM to 4:30 PM EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richard Crispino can be reached on 571-272-1226. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Michael J Felton/
Examiner, Art Unit 1747